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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/534,880	03/24/2000	Shannon M. Nelson	North-391A/A-	2654

7663 7590 01/14/2004

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 01/14/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/534,880

Applicant(s)

NELSON ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

1. This communication is responsive to applicant's 10/14/03 amendments in the application of Shannon M. Nelson et al. for "Shock resistant backplane utilizing infrared communication scheme with electrical interface for embedded systems". The amendments have been entered. Claims 1-11 are now pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 11, it recites the limitation "said respective one of said at least one alternative hardwired electrical conductor" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. (US patent No: 5,903,373) in view of Rostoker et al. (US patent No: 5,729,535).

Regarding claims 1, 3, 6, and 8, Welch discloses a system (102, fig. 9) for operatively interconnecting modules within a computer system (col. 11, lines 32-34) to enable data to be transmitted and received therebetween (col. 11, lines 21-32), comprising: a first module having a first media access control logic circuit (112, fig. 9) for transmitting and receiving data (data processor 112 communicate bi-directionally with remote controller 110) substantially conforming to a standardized infrared communications scheme protocol (note that data processor 112 and remote controller 110 are communicating with infrared transmitter 116 and receiver 118 and data can be transmitted and received optically through link 19, and such infrared transmitter and receiver can be conformed to standardized infrared communications scheme protocol), a second module having a second media access control logic circuit (110, fig. 9) for transmitting and receiving data (controller 110 communicate bi-directionally with data processor 112 and processor 114) substantially conforming to a standardized infrared communications scheme protocol utilized by the first module (note that data processor 112 and remote controller 110 are communicating with infrared transmitter 116 and receiver 118, and such infrared transmitter and receiver can be chosen to be conformed with standardized infrared communications scheme protocol), and a single hardwire electrical conductor signal path (the path or the electrical conductor that connects module 112 to module 110) connecting the first and second modules to facilitate electrical bi-directional communications (col. 11, lines 28-32). Welch differs from the claimed invention in that Welch does not specifically disclose the system is a sock resistant system. Rostoker teaches a sock resistant system (col. 4, lines 25-26 and 1, fig. 2) for a wireless communication board (9, fig. 2, 3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that a data processing system such as the one of

Welch can be housed within a housing such as the one of Rostoker to provide safety and protection. As to a shock resistant system, it is inherent that electrical or optical components are housed within a housing for the reason of safety and protection, and it would have been obvious to provide a house to a system in order to protect it's components and to provide safety to users.

Regarding claims 4 and 9, Welch discloses the first and second modules are operative to run an embedded application (col. 11, lines 30-32, 36-40).

Regarding claim 10, Welch discloses the modules comprise of at least one of an individual circuit board and a daughter board (for example data processor 112 can be a circuit board and remote controller 110 can be a daughter board).

6. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. (US patent No: 5,903,373) in view of Rostoker et al. (US patent No: 5,729,535) and in further view of Matsubara et al. (US Patent No: 6,335,812).

Regarding claims 2 and 7, the modified communication system of Welch and Rostoker differ from the claimed invention in that Welch and Rostoker do not disclose a standardized infrared communications scheme protocol developed by the Infrared Data Association. Matsubara discloses a plurality of optical communication modules (110, 111, fig. 2) that communicate based on infrared scheme protocol developed by the infrared data association. (col. 1, lines 10-18). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical transmitter and an optical receiver that uses a standard protocol defined by IrDA such as the ones of Matsubara for the optical transmitter and receiver in the modified communication system of Welch and Rostoker in order to provide a

point-to-point transmission that support a broad range of applications, computations, and communications.

7. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers et al. (US patent No: 5,959,287) in view of Rostoker et al. (US patent No: 5,729,535).

Regarding claim 1, Myers discloses a system for operatively interconnecting modules (274, 278, fig. 8) within a computer system (12, fig. 8) to enable data to be transmitted and received therebetween (data are transmitted between module 274 and CPU 278), comprising: a first module having a first media access control logic circuit (278, fig. 8), a second module having a second media access control logic circuit (274, fig. 8), and a single hardwire electrical conductor signal path connecting the first and second modules to facilitate electrical bi-directional communications (the two modules are connected by a single electrical wire to provide a bi-directional data communication). Myers differs from the claimed invention in that Myers does not specifically disclose the system is a sock resistant system. Rostoker teaches a sock resistant system (col. 4, lines 25-26 and 1, fig. 2) for a wireless communication board (9, fig. 2, 3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that a data processing system such as the one of Myers can be housed within a housing such as the one of Rostoker to provide safety and protection. As to a shock resistant system, it is inherent that electrical or optical components are housed within a housing for the reason of safety and protection, and it would have been obvious to provide a house to a system in order to protect it's components and to provide safety to users.

As to claim 5, Myers teaches the system (12, fig. 8) comprises a multiplicity of modules (for example modules 274 and 280 in terminal 12 of fig. 8), wherein each of the modules comprises a transmitter and receiver element (modules 274 and 280 each has a transmitter and a receiver) and each module being electrically interfaced to one another via the transmitter and receiver elements (modules 274 and 280 are electrically connected to each other to transmit and receive data therebetween).

8. Applicant's arguments filed 10/14/2003 have been fully considered but they are not persuasive.

Remark states Welch does not teach or suggest a single hardwired electrical conductor signal path between the first and second modules. Welch teaches a data processor 112 that is connected to a remote controller 110, as shown in fig. 9. It is obvious that the two module are connected to each other by a single electrical conductor. As to the conductor to be a single wire or a bus, even a bus can be considered as a single hardwire conductor to connect two modules. Remark further states Welch does not teach or suggest communication between the first and the second module via a standardized infrared communication scheme. Welch teaches the data processor 112 and the remote controller 110 are communicating with both processor 114 and with IR TX 116 and IR RX 118 via interconnect 103 (col. 11, lines 21-35). It is well known that infrared transmitters and receivers such as IR TX 116 and IR RX 118 can transmit and receive optical data signals conforming to standardized infrared communication scheme protocol, for example developed by Infrared Data Association, as it is discussed above in claims 2 and 7. As to a shock resistant system, Rostoker is cited to show a sock resistant system (1, fig.

2) that is provided for a wireless communication board (9, fig. 2, 3). It is inherent that electrical or optical components can be housed within a housing, or within a shock resistant system, such as tower 1 of Rostoker to provide safety, protection, and electrical isolation. Applicant's attention is directed that during the prosecution of a pending patent application the terms found in the claims should be given the broadest reasonable interpretation, *See in re Pearson*, 181 USPQ 641 (CCPA 1974).

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

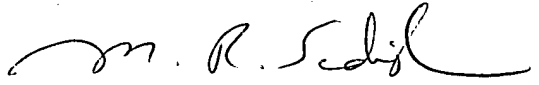
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad R Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


M.R. SEDIGHIAN
Patent Examiner
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